

CLAIMS

1. An Mg material comprising a matrix with a C long-fiber reinforcement characterised in that the C long fibers are provided with a thin layer, wherein at least one element of the layer material forms a homogeneous chemical reaction layer with the respective C long fiber, and the thin layer forms a diffusion barrier so that the local formation of relatively coarse reaction products of alloying elements from the matrix with the C long fibers is prevented.
2. An Mg material as set forth in claim 1 characterised in that the layer material of the thin layer is formed by carbide-forming agents.
3. An Mg material as set forth in claim 2 characterised in that the layer material of the thin layer is formed by Al, Cr, Ti, Ta, Nb, Hf and Zr.
4. An Mg material as set forth in claim 2 characterised in that the layer material of the thin layer is formed by alloys on an Ni basis, which contain carbide-forming agents.
5. An Mg material as set forth in one of claims 1 through 4 characterised in that the thin layer is produced by a PVD or CVD process.
6. An Mg material as set forth in claim 5 characterised in that the thin layer is applied to the C long fibers by sputtering.
7. An Mg material as set forth in claim 5 characterised in that the thin layer is applied to the C long fibers galvanically, wet-chemically or by a currentlessly electrochemical process.
8. An Mg material as set forth in one of claims 1 through 7 characterised in that the thin layer is of a thickness in the range of between some nm and some μm .

9. Use of an Mg material as set forth in one of claims 1 through 8 for the production of pistons of internal combustion engines.

10. Use of an Mg material as set forth in one of claims 1 through 8 for the production of connecting rods of internal combustion engines.

11. Use of an Mg material as set forth in one of claims 1 through 8 for the production of propulsion bases for sub-caliber projectiles.